

Data Sheet for Joysticks

Thumb Joystick

Series TRY13



- Ergonomic thumb wheel / Single axis joystick
- Up to 5 million cycles
- Contactless, wear-free Hall sensor joysticks
- With spring return
- Sensitive response to user operation
- Wheel available in colours red, grey, black or blue

The TRY13 series is a minimal width, low profile thumbwheel that provides smooth, precise control in a single axis. It uses Hall effect technology for long life with proportional outputs, ensuring stable output signals over a long life. The design is optimized for mounting in consoles and large joysticks. Configuration options include output voltage range, thumbwheel colour and termination (pitch connector or mating harness).

Electrical Data

Sensor	Hall Effect
Power Supply	5 ± 0.5 VDC transient free
Resolution	1.22 mV
Return to Center Voltage Tolerance	±200 mV initial
Output Signal	0 to 5.0 V / 0.5 to 4.5 V / 1.0 to 4.0 V / redundant outputs available
Output Impedance	1.5 Ω
MTBF*	5,481,566 hours at 20°C

*valid only for the electronics, according to MIL-HDBK-217F (Part Stress Analysis Prediction)

Mechanical and Environmental Data

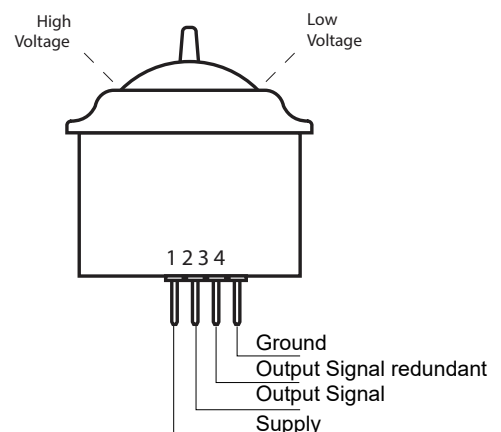
Mechanical Angle of Movement	80° (±40° from center)
Expected Life	5 million cycles
Break Out Force	0.7 N
Sealing	IP67 (only Joystick electronics)
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
EMC Immunity Level	EN61000-4-3 (extended)
EMC Emissions Level	EN61000-6-3:2001
ESD	EN61000-4-2 (extended)

Wiring

Function	Pin	Wire Color
Supply	1	red
Output signal	2	blue
Output signal redundant (*)	3	blue/white
Ground	4	black

(*) optional; standard: Pin not connected.

Connection either by wire AWG28 (standard version), or with a TE Connectivity (4 position TE 3-647166-4 header connector, 2.54mm pitch).



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Please contact us for information regarding stock articles, delivery times and minimum order quantities.

Order Description

Description	Selection: standard= black/bold , possible options= <i>grey/italics</i>						
Series	TRY13						
Axes/Functions: 1 Axis	1						
Cover: Square		0					
Return Mechanism: Spring return to center position			1				
Thumbwheel: <i>Black</i> <i>Grey</i> <i>Red</i> <i>Blue</i> Black with Tab <i>Grey with Tab</i> <i>Red with Tab</i> <i>Blue with Tab</i>						<i>1</i> <i>2</i> <i>3</i> <i>4</i> 5 <i>6</i> <i>7</i> <i>8</i>	
Output Signal: 0 to 5.0 V (<i>redundant signals parallel / inverse ⁽¹⁾</i>) 0.5 to 4.5 V (<i>redundant signals parallel / inverse ⁽²⁾</i>) 1.0 to 4.0 V (<i>redundant signals parallel / inverse ⁽³⁾</i>)						1 (<i>1P / 1X</i>) 2 (<i>2P / 2X</i>) 3 (<i>3P / 3X</i>)	
Connection: Wire AWG28 (Standard) 4 pin header, 2.54 mm pitch ^(*)							-/- S

For higher quantities or on-going demand, additional options are available

- Customer-specific cables



Thumbwheels in black, red, blue, grey - with and without tab.



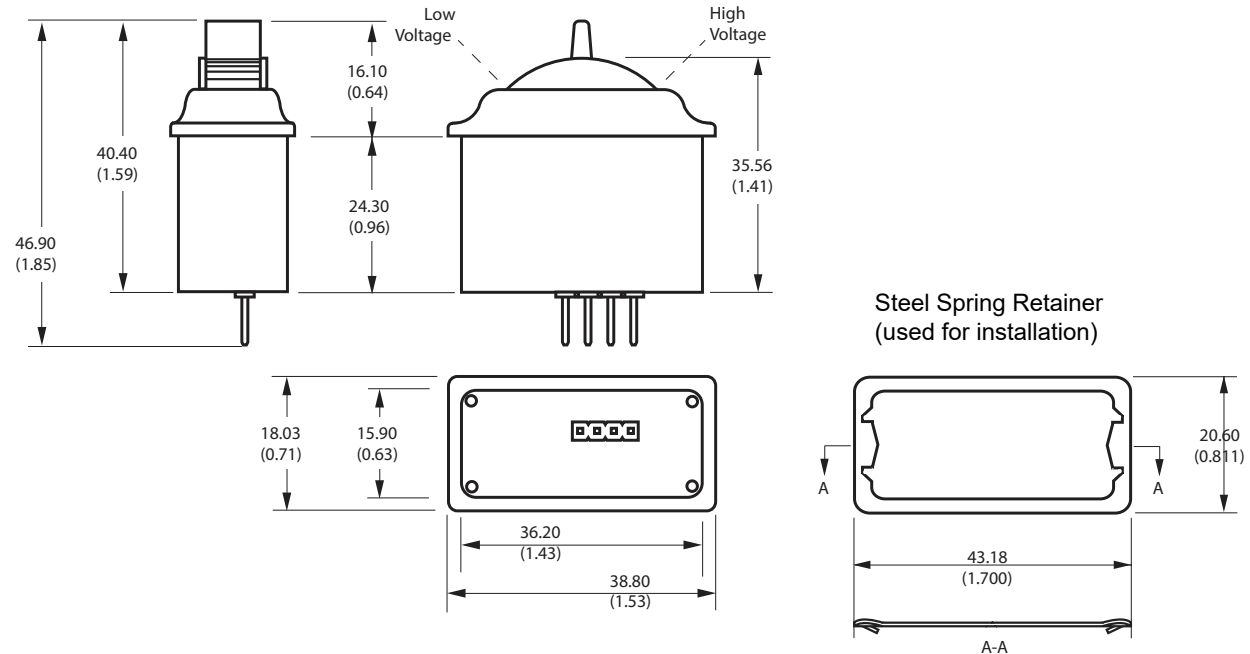
Integration into Hand-Grip Joystick (e.g. TRY81)

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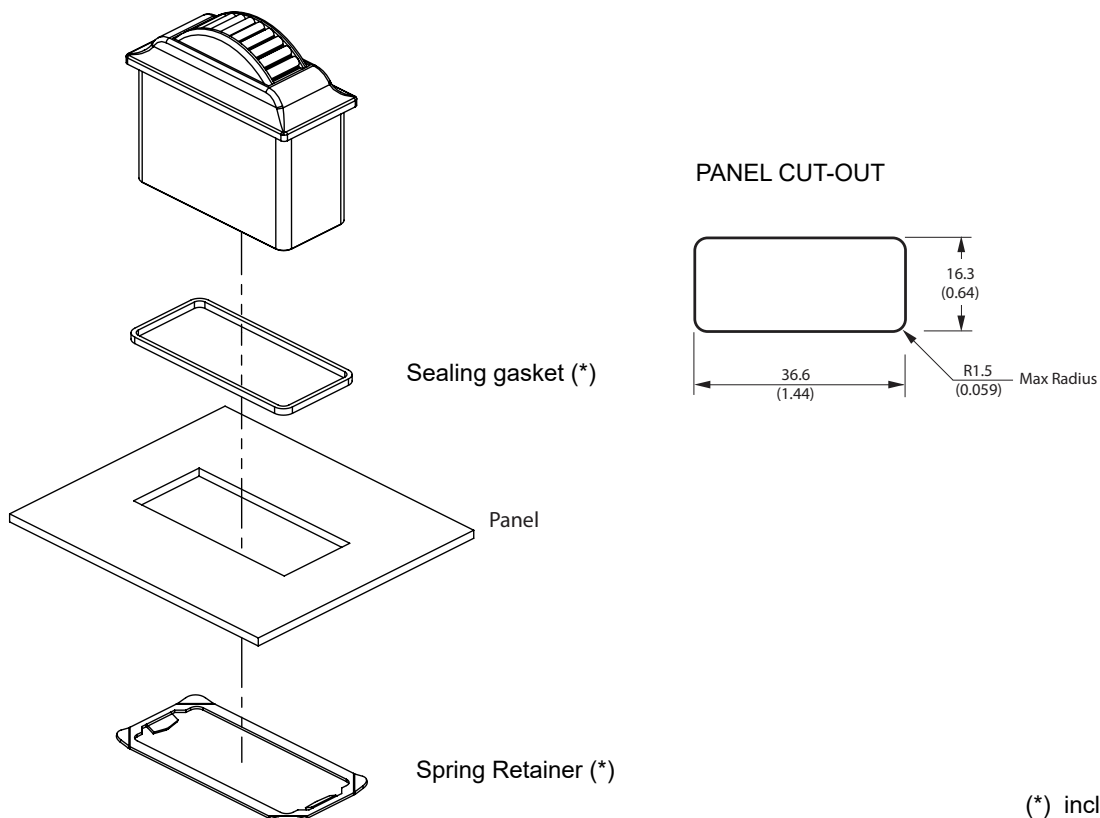
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Drawing



Mounting



(*) included

All dimensions in mm (inch)